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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,974	01/15/2004	William T. Futral	42P7412C	8333

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BLAKELY SOKOLOFF TAYLOR & ZAFMAN
1279 OAKMEAD PARKWAY
SUNNYVALE, CA 94085-4040

EXAMINER

SMITH, MARCUS

ART UNIT	PAPER NUMBER
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2619

MAIL DATE	DELIVERY MODE
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01/09/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/759,974

Applicant(s)

FUTRAL, WILLIAM T.

Examiner

Marcus R. Smith

Art Unit

2619

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-27 and 30-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-27 and 30-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed 10/03/07 is sufficient to overcome the rejection of claims 25-27, 30-33 based upon Forin (US 6,594,701).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 25-27 and 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma (US 6,618,354) in view of Weber et al. (US 6,185,620).

with regard to claim 25

Sharma teaches: (see figures 2-4)

A method comprising:

receiving credits at a first device (node A) transferred from a second device (node B) (step 54, figure 4, :column 4, lines 60-67: sending the credits to node A can be consider Packet Q in figure 3.);

storing the credits in a credit register a number of available credits in the credit register (no_credit_B_Qi) indicating to the first device a number of receive buffers available in the second device (step 33 in figure 3: column 4, lines 18-24),

(if the packet is forward to another node in step 35, then the next step will in be figure 2 at step 21),

if the number of available credits is at least sufficient to permit a transfer of data to occur (step 23: column 4, lines 5-10), transferring the data from the first device to the second device (step 27: column 4, lines 13-15); and

if the number of available credits is not sufficient to permit the transfer to occur (step 23: column 4, lines 5-10), waiting for a change in the number of available the credits to occur prior to transferring the data from the first device to the second device (step 24: column 4, lines 5-10).

Sharma discloses all of the subject matter as described above except for the credits are transferred across the channel-based switching fabric under control of the second device using a remote direct memory access (RDMA) write operation into the credit register.

Sharma teaches credits and packets being transferred a bus C, but Weber et al. teaches the packets and credits being transferred over the switch fabric (figure 5, column 4, lines 40-50). Weber et al. teaches a direct memory access write operation for writing data in the registers (column 7, lines 25-39) in order to minimize time spent on Bus system (column 1, lines 55-60).

Therefore it would have been obvious to one having ordinary skill in the art at the time invention was made to transfer credits and packets across the channel-based switching fabric under control of the second device using a remote direct memory

access (RDMA) write operation into the credit register as taught by Weber et al. in the system of Sharma in order to minimize time spent on bus system.

over the channel-based switching fabric.

with regard to claim 26, sharma teaches:

The method of claim 25, wherein:

the number of available credits represents one or more buffers available to store the data (column 1, lines 30-40).

with regard to claim 27, Weber et. al. teaches (See figure 6):

The method of claim 25, wherein:

the first device comprises an input/output node (IOP 608); and

the second device comprises a host device (602) (column 5, lines 19-30).

with regard to claim 30, sharma teaches:

The method of claim 25, wherein:

the first device comprises:

a first interface to issue one or more commands to initiate establishment of a connection between the first device and the second device, and to post one or more data transfer requests to one or more queues (request queue: column 1, lines 45-50); and

a second interface capable of, in response to the one or more data transfer requests, issuing the data from one or more buffers to the second device (response queue: column 1, lines 45-56).

with regard to claim 31, Weber et. al. teaches (See figure 6)::

The method of claim 30, wherein:

the first interface comprises a virtual interface (request queue in the shared memory is a virtual interface; and

the second interface comprises a network interface (response queue in the host memory is a network interface column 5, line 30-52).

with regard to claim 32, Weber et. al. teaches (See figure 7):

The method of claim 30, wherein:

the first interface is capable of issuing the one or more commands to a kernel agent (chip 708)(column 5, lines 60-67).

with regard to claim 33, sharma teaches (see step 26 in figure 2):

The method of claim 25, further comprising:

maintaining a counter in the first device; and updating the counter each time data is transferred to the second device, wherein the number of available credits in the credit register is equal to a difference between the counter and the credit register (column 4, lines 10-13).

Response to Arguments

4. Applicant's arguments with respect to claims 25-27, and 30-33 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus R. Smith whose telephone number is 571 270 1096. The examiner can normally be reached on Mon-Fri. 7:30 am - 5:00 pm every other Friday.

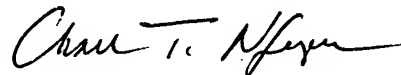
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 571 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MRS 12/28/07



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